

Net Metering

Distributed Generation Workshop Series

Minnesota Department of Commerce

Lise Trudeau, Engineer

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Who we are..



- **Minnesota Department of Commerce**
 - **Division of Energy Resources**
 - State Energy Office
 - **Providing energy information for over 35 years...**
 - Energy conservation, efficiency, & renewables
 - Through technology, analysis, grants, programs, & public outreach
 - Data, reports, publications, presentations, website, call center, training, public events

Net Metering in MN: History

- **1978: PURPA** provided for payment at avoided cost
- **1983: MN was first state to implement Net-Metering at retail.**
- **2011: There are now 43 states with net metering policies**



1983

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Net Metering at Retail Rate

- **38 states + DC & Puerto Rico**
 - Of these, 34 have capacity limits greater than MN
- **MN is unique only in that net excess generation is monetized instead of rolling over kWh credit. (WI & MA also do this)**

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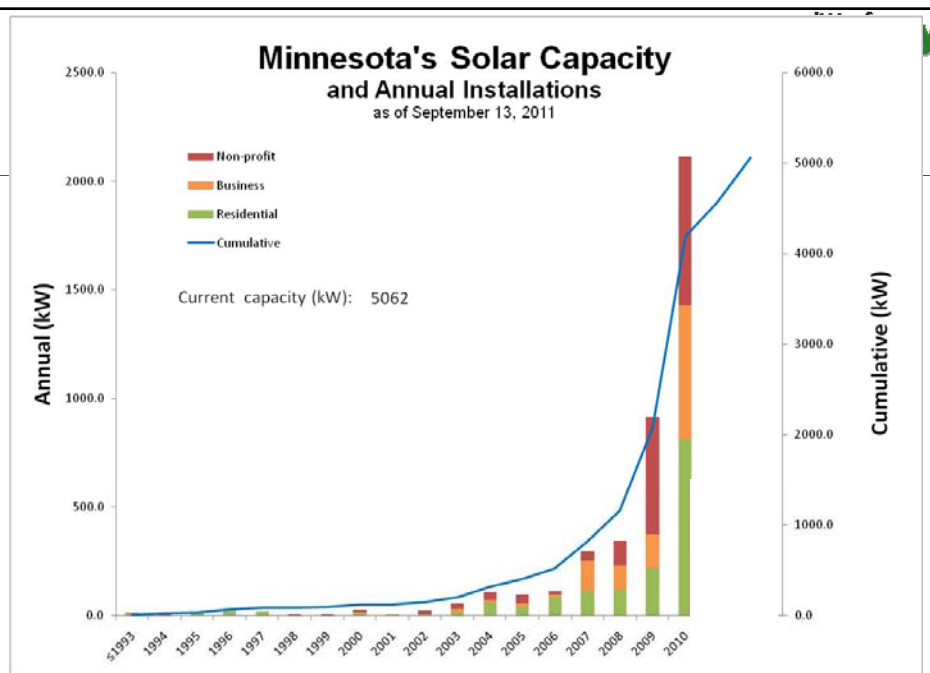
Largest PV systems in MN



System Owner/Host	City	Capacity
Minneapolis Convention Center	Minneapolis	600.0
St. John's University	St. Michael	400.0
Merrick Corporation	Vadnais Heights	100.0
Hennepin County	Medina	97.0
Great River Energy	Elk River	70.0
Quality Bicycle Parts	Bloomington	40.0
Shamrock Investments	Fridley	39.9
Shamrock Investments II, LLC	Minneapolis	39.9
Transfiguration Church	Oakdale	39.9
Machineland USA (Pellco)	St. Michael	39.9
name withheld	Roseville	39.8
name withheld	Minneapolis	39.8
Yellowthroat, LLC	New Hope	39.6
Mulroy's Body Shop	Minneapolis	39.2

Source: MN Division of Energy Resources

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Source: MN Division of Energy Resources

Potential Areas for Change

- System size limits
- Rollover of Net-Excess Generation (NEG)
- Aggregate metering
- REC ownership
- Metering
- Third-party financing
- Utility reporting

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System Size Limits

- Nameplate Capacity limits can be vague
- Sizing to load – load varies annually, production estimates are sometimes overstated



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Rollover NEG

Most states with high capacity limits give a kWh credit for NEG

- **Effectively sizes benefit from NEG to load**
- **kWh credit is closer to retail rate, which benefits smaller systems**
- **If rolled over indefinitely, kWh credit can't offset fixed charges or demand charges**

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Aggregate Metering

- **Resolves some eligibility questions for sites with multiple meters**
- **Farmer could site turbine on property where resource is greatest**
- **Allows multi-tenant properties to share DG benefits**

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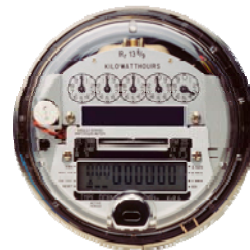
REC Ownership

- 2003 FERC determined that RECs don't automatically go to utilities, left it up to states to decide
- State standard contract is silent
- Cost to register in M-RETS is prohibitive

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Metering

- Bi-Directional metering most common
- Several states specify bi-directional meters for net metered systems
- Systems below 25kW should not need two meters.



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Third-party financing

- **Net-Metering policy could specify that 3rd-party owners for on-site generation are not considered utilities**
- **States that specifically allow 3rd party financing have seen much higher penetration of DG**

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Rules and Utility Reporting

- **Three different reports**
 - **Cogen tariff, due March 1**
 - **Qualifying Facilities report, due Nov. 1**
 - **DG Interconnection, due Mar. 1**
- **Calculation of Average retail rate unclear**

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Questions?

Additional comments and questions:

1-800-657-3710 (MN only)
651-296-5175

energy.info@state.mn.us



Resources



Current applicable Net-Metering statutes and rules in MN:

- Minn. Statute 216B.164, <https://www.revisor.mn.gov/statutes/?id=216B.164>
- Minn. Rules 7835 Filing requirements and Rules for Cogeneration and Small Power Production, <https://www.revisor.mn.gov/rules/?id=7835>

Docket numbers for Cogeneration and Small Power Production filings: 9-54 (2007 and 2008), 10-9 (2009) , 11-9 (2010). To search docket system, go to <https://www.edockets.state.mn.us/EFiling/search.jsp>.

DSIRE summary of MN net-metering policy
http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MN01R&re=1&ee=1

Resources

Reports

- NREL [Net Metering Policy Development and Distributed Solar Generation in Minnesota Overview of Trends in Nationwide Policy Development and Implications of Increasing the Eligible System Size Cap. December 2009](http://www.nrel.gov/docs/fy10osti/46670.pdf) <http://www.nrel.gov/docs/fy10osti/46670.pdf>
- IREC 2009 Model Net Metering Rules http://irecusa.org/wp-content/uploads/2009/10/IREC_NM_Model_October_2009-1.pdf
- IREC Connecting to the Grid Guide 6th Edition <http://irecusa.org/wp-content/uploads/2009/11/Connecting-to-the-Grid-Guide-6th-edition.pdf>
- Freeing the Grid – annual report from Network for New Energy Choices (NNEC) of best and worst practices for net-metering and interconnection with a ranking of states. <http://www.freeingthegrid.org/>

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Resources

Other resources

- Kelly Davidson, *Community Energy: Solar Gardens a Growing Trend*, Home Power Magazine, June/July 2011 issue, p.14 http://homepower.com/article/?file=HP143_pg14_NewsAndNotes
- IREC [State-by-State Net Metering Map](http://www.dsireusa.org/documents/SummaryMaps/Net_Metering_Map.ppt) http://www.dsireusa.org/documents/SummaryMaps/Net_Metering_Map.ppt
- IREC [State-by-State Net Metering Table](http://irecusa.org/wp-content/uploads/2010/01/January_2010_NM_Table.doc) (Word format, January 2010) http://irecusa.org/wp-content/uploads/2010/01/January_2010_NM_Table.doc
- IREC [State-by-State Net Metering Table](http://irecusa.org/irec-programs/connecting-to-the-grid/net-metering) (HTML, Updated daily through a data feed from DSIRE) <http://irecusa.org/irec-programs/connecting-to-the-grid/net-metering>

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